

Shaytown Road Bridge
Spanning Thornapple River
Vermontville Vicinity
Eaton County
Michigan

HAER No. MI-105

HAER
MI-105
23-VERVI.V
1-

PHOTOGRAPHS
WRITTEN HISTORICAL AND DESCRIPTIVE DATA

Historic American Engineering Record
National Park Service
Great Lakes Systems Office
1709 Jackson Street
Omaha, Nebraska 68102-2571

HISTORIC AMERICAN ENGINEERING RECORD

SHAYTOWN ROAD BRIDGE

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Location: Spanning Thornapple River, Vermontville vicinity, Eaton County, Michigan.

UTM: 16.666030.4720320
Quad: Chester, Michigan

Date of Construction: 1913

Present Owner: Eaton County Road Commission
1112 Reynolds Road
Charlotte, Michigan 48813

Present Use: The bridge is limited to traffic weighing 7 tons or less.

Significance: The Shaytown Road Bridge is a Warren through truss structure. It is one of only two known structures of this type in Michigan. It is the only Warren truss in Michigan utilizing pin-connections as opposed to rivets for member connections, a method typically confined to Pratt trusses. It has been considered eligible for the National Register of Historic Places since 1992.

Project Information: HAER documentation was undertaken in November of 1995 in accordance with the Memorandum of Agreement agreed to by the Eaton County Road Commission and the Michigan State Historic Preservation Office. The Memorandum of Agreement is a mitigative measure used to maintain the bridge in a different location through a sale or a transfer to an interested party, if there is one, who would use and preserve the structure. This action was not successful. The bridge will be dismantled during the construction of its replacement.

Author: Robert H. Scott, President
Scott Civil Engineering Company
1601 McKay Tower
146 Monroe Center NW
Grand Rapids, MI 49503

Summary Description of Bridge and Setting

The Shaytown Road Bridge over the Thornapple River is located in Sections 25 and 26 of Vermontville Township, Eaton County, Michigan. Shaytown Road is a north-south road situated on a 20.12-meter (66-foot) right-of-way. The roadway surface in the vicinity of the bridge is gravel, averaging 4.9 meters (16 feet) in width. Anderson Highway intersects Shaytown Road immediately north of the bridge, Vermontville Highway intersects Shaytown Road approximately 800 meters (0.5 miles) north of the bridge and Lamie Highway intersects Shaytown Road approximately 800 meters (0.5 miles) south of the bridge. The Shaytown Road Bridge provided access to railroad tracks situated immediately south of the bridge, access to school and church for area residents, and access to markets and fields by farmers on both sides of the river. It is typical of the many "farm to market" bridges constructed in the late 1800's and early 1900's in the rural areas of Michigan.

The original plans for the Shaytown Road Bridge cannot be located. The bridge has no nameplate. A review of road commission files has uncovered no record of construction or photographs.

Records from the Vermontville Township, Eaton County Clerk, Eaton County Road Commission, Eaton County Historical Commission and the Library of Michigan failed to uncover any record of the Shaytown Road Bridge. A search of the Vermontville and the Charlotte newspapers was unsuccessful, also, at finding any record.

The bridge is a single-span steel Warren through truss with pinned connections. Each truss has six panels that are 6.10 meters (20.0 feet) long, creating a span of 36.57 meters (120.0 feet). The clear distance between trusses is 4.75 meters (15.6 feet). The top and inclined members (compression members) of the truss consist of two channels with a top plate riveted to the top flange of the channels. The vertical members consist of four angles connected by lattice work. Flat steel bars are welded to the four angles to create a lattice pattern. The inner diagonals consist of two channels connected with lattice work. The outer diagonals consist of two eye bars. The inner bottom chords (tension members) consist of two eye bars and the outer bottom chords consist of two angles. The deck consists of 83-mm (3¼-inch) thick transverse timber planking supported by six 178-mm (7-inch) steel stringers and two 178-mm (7-inch) fascia channels. These members are supported by 457-mm (15-inch) floor beams at each truss panel point.

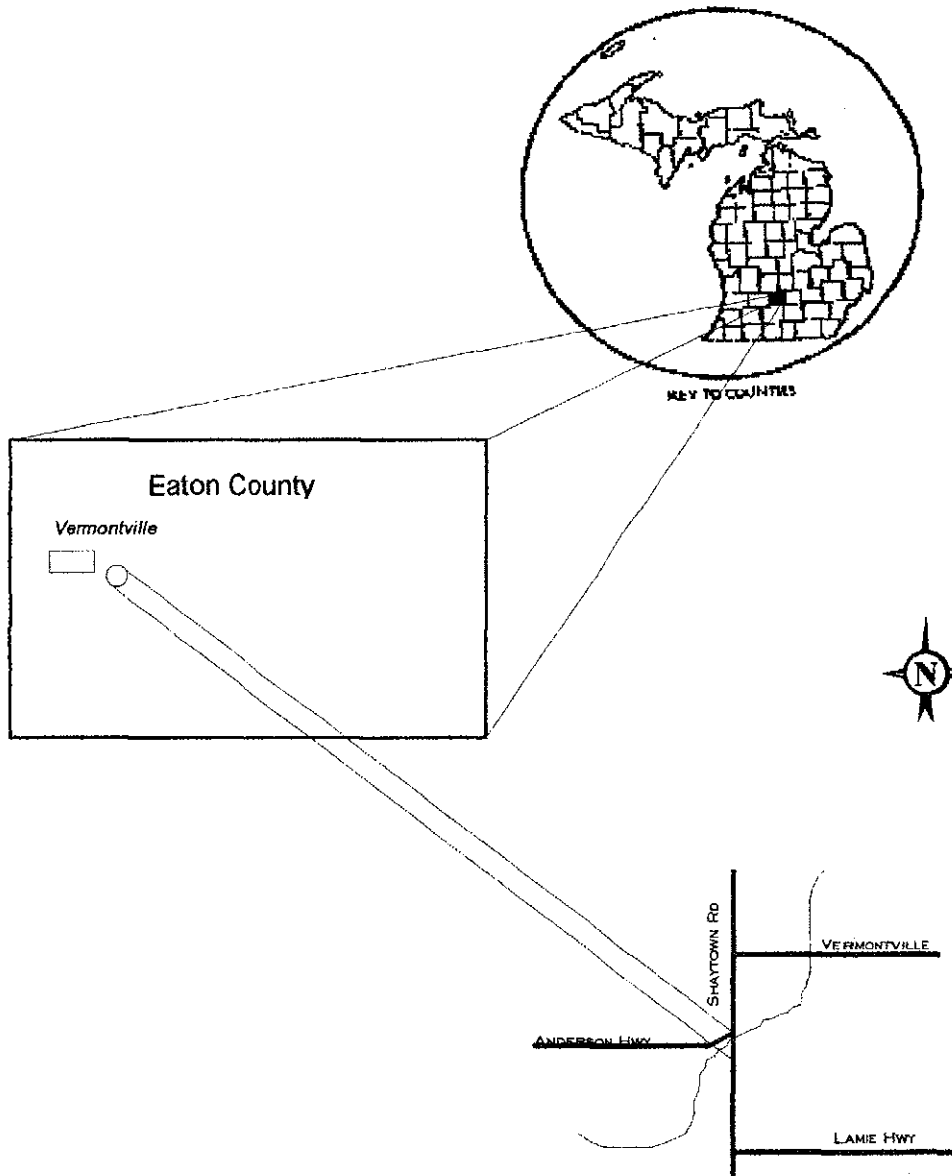
The trusses are supported by cobblestone abutments with concrete caps. There are no wingwalls to retain the road fill and the original slopes. Steel angles with crisscrossing steel bars serve as the bridge railings, fastened along each side of the truss.

The Shaytown Road Bridge is typical of most bridges built in southern Michigan around the late 19th century and early 20th century. Because of the relatively lightweight truss superstructure, the bridge was fabricated at a steel fabrication plant and shipped by rail to the job site. The contractor constructed the substructure units, then assembled and erected the steel truss on-site.

BIBLIOGRAPHY

Hyde, Charles K., Historic Highway Bridges of Michigan, Detroit, Michigan; Wayne State University, 1993.

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SITE
LOCATION MAP